Superior Crude Gathering, Inc. P.O. Box 260784 Corpus Christi, Texas 78426 Phone 361.882.5117 Fax 361.882.4881 RECEIVED RRC OF TEXAS APR 2 6 2010 O&G CORPUS CHRISTITX

VIA HAND DELIVERY

April 23, 2010

Arnold Ott, P.E. Assistant District Director Railroad Commission of Texas 10320 IH 37 P.O. Box 10307 Corpus Christi, TX 78460-0307

> Re: Draft Site Investigation Work Plan - Revised Superior Crude Gathering, Inc., Ingleside, San Patricio County, Texas

Dear Mr. Ott:

Please see enclosed with this letter a Revised Draft Site Investigation Work Plan ("Draft Plan") developed by Pastor, Behling & Wheeler, LLC (PBW). Also enclosed are our responses to your specific comments in the order that they appear in your April 19, 2010 letter to Superior. We generally agree with most of the comments and have addressed them in the revised Work Plan. However, there are a few technical issues we would like to discuss with the RRC in order to finalize the revised Work Plan. Accordingly, Superior requests a meeting between our technical team and the RRC in the very near future to discuss and resolve the remaining technical issues, as described in the attached Response to Comments. These issues include:

- 1) The specific regulatory criteria that will be used as cleanup levels for the site;
- 2) The establishment of "background" conditions at the site; and
- 3) The schedule for the investigation and cleanup of the site.

Please contact me with any questions regarding the information presented in this letter. We look forward to continuing to work with the Railroad Commission to complete the necessary actions.

Jeff Kirby, President

Superior Crude Gathering, Inc.

# RESPONSE TO RRC COMMENTS DATED APRIL 19, 2010 SITE INVESTIGATION WORK PLAN – SUPERIOR CRUDE GATHERING FALCON REFINERY LOCATION

cc: David Cooney
Assistant Director, Environmental Law
Railroad Commission of Texas
1701 North Congress Avenue
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Austin, TX 78711-2967

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# RESPONSE TO RRC COMMENTS DATED APRIL 19, 2010 O&G SITE INVESTIGATION WORK PLAN – SUPERIOR CRUDE GATHERING PUS CHRISTI TX FALCON REFINERY LOCATION

# RRC COMMENT No. 1 (Paragraph 2, Page 1):

The purpose of the plan is to advise the Railroad Commission (RRC) how Superior intends to identify/delineate the nature and extent of contamination that has come to be located in soil and surface and subsurface water as a result of the crude oil releases between February 9 and 13, 2010, at Superior's Ingleside Terminal. Your sampling plan should confirm the success, or not, of current efforts to remove oil and oily materials from the surface, identify areas where vertical penetration occurred, and depth of vertical penetration.

SUPERIOR RESPONSE: Superior agrees that these are the objectives of the investigation. Revisions have been made to the work plan accordingly. Please note that the spill occurred on February 9 and 10, not February 13.

# RRC COMMENT No. 2 (Paragraph 4, Page 1):

What exactly is meant in on page two of the plan where it says, "The soil investigation described in Section 2 of this work plan will be conducted once all crude oil, visually contaminated material, and water used during the clean up have been removed from the tank farm area."? Does Superior intend to remove all crude oil from the soil, grass and water at the tank farm? Does Superior intend to remove all visually impacted soil? Please advise in detail. We presume Superior has removed or will remove all oil from impacted surface water, but please confirm this as well.

SUPERIOR RESPONSE: This statement was meant to indicate that the soil investigation will be conducted once the initial response to the crude oil spill was completed. As you know, Superior has used various means to recover the crude oil released at the site and has completed this task. Crude oil recovery methods have included the use of water to move crude oil (either floating on water or on the soil) to locations where it could be recovered. Superior intends to remove all of the water used in this manner prior to conducting the soil sampling. Other contaminated material may also be removed, such as grass or other vegetation that is contaminated or saturated with oil. However, it will not be feasible to remove all visually-contaminated soil prior to conducting the investigation. Superior has revised the work plan to clarify these issues.

Furthermore, at this time, Superior does not commit to removing soil as a means of remediating the site. Soil removal is one of several options being considered.

Finally, Superior had already removed all oil from impacted surface water as indicated in its March 15, 2010 report.

# RRC COMMENT No. 3 (Paragraph 5, Page 1):

Identify the specific "applicable regulatory criteria" to which the plan refers in sections 2.1, the specific "applicable riskbased regulatory criteria" to which the plan refers under the heading "Task 3-Perform Risk-Based Screening," and the specific "applicable regulatory criteria" to which the plan refers in the last bullet on page five. In short, what regulatory criteria do you propose to use? RRC staff recommends using critical Tier I PCLs.

SUPERIOR RESPONSE: Superior intends to apply cleanup criteria that are selected and approved for this site, based on recognized risk-based standards. Because the RRC takes the position that the entire spill site is a "sensitive area", which must be handled on a case-by-case basis under Rule 91, Superior would like to meet with the RRC to discuss the various regulatory criteria that are applicable to this

# RESPONSE TO RRC COMMENTS DATED APRIL 19, 2010 SITE INVESTIGATION WORK PLAN – SUPERIOR CRUDE GATHERING CHRISTI TX FALCON REFINERY LOCATION

cleanup and how the final criteria will be determined, based on risk assessment or evaluation of other relevant factors. Superior would like clarification on the RRC's recommendation of the use of "critical Tier I PCLs".

## RRC COMMENT No. 4 (Paragraph 6, Page 1):

Locations and number of samples should be based on what was observed during surface removal. The sampling should occur on all parts of the NORCO property impacted by the release of crude oil from tank 13, tank 15, and from all of the underground piping that caused the oil to spread away from the containment areas of tanks 13 and 15. Oil saturated soil is likely present under the tanks and near the tank spill points. EPA generated a map or aerial photograph that identifies all places where the oil came to be located, and that map could be a basis for identifying surface soil sample locations. We understand that the EPA is available to provide raw Trimble data to transfer into Superior's Trimble to provide an outline of areas noted as contaminated.

SUPERIOR RESPONSE: Superior generally agrees with the RRC's statement that the locations and numbers of samples should be based on what was observed during the initial surface cleanup. Regarding the reference to the EPA map in sentence 4 of paragraph 6, Superior used the EPA map/aerial photograph to develop the maps included in the plan (i.e., the "extent of oil contamination in soil" area on the EPA figure was digitized and added to the aerial-photo base map provided in the work plan). Therefore, the sampling locations should encompass the areas where oil came to be located. However, the area of impact shown on the map is considered approximate and the investigation will be conducted at all areas impacted by the crude oil spill (with the exception of the Duck Pond, which has been remediated).

## RRC COMMENT No. 5 (Paragraph 7, beginning on Page 1):

One sample at each comer of each tank where oil came to be located is not enough. For every side of a tank that was impacted, there should be a sample at each end and three samples in between. Sampling frequency for other areas not defined by tanks should be at similar distances. It may also be useful to take samples from places believed to be un-impacted within the containment areas to establish a background.

SUPERIOR RESPONSE: As we understand it, the RRC is requesting that Superior collect 16 soil samples in each tank containment area. Superior and PBW feel that the objectives of the investigation can be met with fewer samples that are appropriately located. Superior proposes to collect 8 samples per containment area, using the rationale described in the revised work plan. Superior requests clarification on the RRC recommendation regarding the collection of background samples since BTEX and TPH are not naturally occurring and background concentrations would be expected to be below laboratory detection limits. We would like to discuss with the RRC our sampling rationale as well as whether background samples are practical, given pre-existing contamination (before the crude oil spill).

RRC COMMENT No. 6 (First Full Paragraph, Page 2, including the three bulleted items):

Based on observations of soil type and vegetative cover, your sampling plan should involve use of a hand auger (which helps address any underground piping concerns) or other boring equipment, to achieve the following objectives:

- confirm the success or not of surface remediation; i.e., show that oily material at surface has been removed
- 2) characterize the vertical extent of any penetration that may have occurred, and

# RESPONSE TO RRC COMMENTS DATED APRIL 19, 2010 O&G SITE INVESTIGATION WORK PLAN – SUPERIOR CRUDE GATHERINGPUS CHRISTI TX FALCON REFINERY LOCATION

 characterize concentrations of TPH and BTEX remaining in soil beneath areas where they removed free oil and oily materials from the surface.

SUPERIOR RESPONSE: Superior agrees with this comment. Superior plans to use hand augering equipment (or other hand equipment, i.e., not a drilling rig) to collect the soil samples. Superior agrees with the three objectives provided by the RRC, and has included them in the revised plan.

#### RRC COMMENT No. 7 (Paragraph 2, Page 2):

Identify the occurrence of hydrocarbons in auger cores (or cuttings if hand auger is used) and record via boring log, whether hydrocarbons appear as NAPL saturating the soil, stain, or just odors. Discrete samples should be collected both from affected soils and unaffected soil so as to delineate the vertical extent of contamination. Because of anticipated shallow groundwater, we recommend that samples be collected in intervals no greater than 6 inches.

SUPERIOR RESPONSE: Superior plans to have a field geologist or engineer examine and describe the samples, and will pay particular attention to the potential presence of NAPL, oil saturation, oil staining, odors, etc. Samples will be collected so as to delineate the vertical extent of contamination. Sample intervals will be no greater than 6 inches. The work plan has been revised accordingly.

#### RRC COMMENT No. 8 (Paragraph 3, Page 2):

All this information (analytical and visual) can then be used to evaluation remediation options.

SUPERIOR RESPONSE: Superior agrees with this comment.

#### RRC COMMENT No. 9 (Paragraph 4, Page 2):

The proposed plan should address investigation of and possible removal of spilled crude from the underground piping that allowed movement of crude outside areas leased to Superior Crude Gathering, Inc. The proposed plan should include testing waste for VOC, SVOC, RCRA 8 Metals, chlorides and additional items for proper waste characterization.

SUPERIOR RESPONSE: Superior recognizes the potential for residual crude oil to be present in the underground piping at the site and plans to investigate this potential, as described in the revised work plan.

Superior would like to discuss with the RRC further clarification on waste characterization and testing.

# RRC COMMENT No. 10 (Paragraph 5, Page 2):

Concerning the last bullet on page five, execution of this plan should result in identification of the nature and extent of soil and, if applicable, groundwater, impacted in any way by the releases on February 9 and 10, 2010. We expect to see sample results at each sampling location and will participate fully in deciding what requires remediation.

SUPERIOR RESPONSE: Superior agrees that the end result of the investigation will be the identification of the nature and extent of soil and, if applicable, groundwater, impacted in any way by the releases on February 9 and 10, 2010. Superior also intends to share all data collected as a result of the investigation and work with the RRC to develop a sound and feasible remediation plan.

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# RESPONSE TO RRC COMMENTS DATED APRIL 19, 2010 O&G SITE INVESTIGATION WORK PLAN – SUPERIOR CRUDE GATHERING CHRISTI TX FALCON REFINERY LOCATION

RRC COMMENT No. 11 (Paragraph 6, Page 2):

Please assure the plan includes a provision that this office will be provided at least three days notice prior to all sampling events so that we may attend.

SUPERIOR RESPONSE: Agreed. The plan has been revised accordingly.

# SITE INVESTIGATION WORK PLAN

SUPERIOR CRUDE GATHERING, INC. INVESTIGATION OF CRUDE OIL RELEASE INGLESIDE, TEXAS

April 23, 2010

Prepared for:

SUPERIOR CRUDE GATHERING, INC. Ingleside, Texas

Prepared by:

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PBW Project No: 3190

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#### 1.0 INTRODUCTION

# 1.1 Project Objectives

This Site Investigation Work Plan was prepared by Pastor, Behling &Wheeler, LLC (PBW) to address field, sampling, and analytical activities proposed for the Superior Crude Gathering Inc. (Superior) site in Ingleside, Texas (the Site). The purpose of this plan is to document proposed field and sample collection procedures for an investigation of a crude oil release at the Site. The overall objective of the investigation is to provide the data necessary to delineate the extent of impacted media at the Site such that a remediation plan can be developed.

# 1.2 Site Description and Background

The Site is located within the former Falcon Refinery at 1472 FM 2725 in Ingleside, San Patricio County, Texas. The property is owned by National Oil Recovery Corporation (NORCO). Since 2002, Superior has leased three tanks (designated as Tanks 13, 15 and 16 (Figure 1)), which have a capacity of 100,000, 55,000 and 55,000 barrels (bbls), respectively. The three tanks are located within a larger tank farm, as shown on Figure 1.

On February 9, 2010, crude oil was discovered leaking from Tank 13 into the containment area around the tank and approximately 22,000 bbls of crude oil eventually leaked from the tank. The crude oil in Tank 13 was South Texas crude obtained from various oil fields in south and central Texas. Although the berms and dikes around Tank 13 contained the oil, a significant amount of oil was carried by underground piping into the containment area around another storage tank facility on the Falcon Refinery property. This storage facility, which Superior does not lease from NORCO, is adjacent to small pond in the area (the "Duck Pond") (Figure 1). It was determined that this other containment area had an open pipe that allowed approximately 2,200 bbls of crude oil to flow into the pond. Crude oil that leaked from Tank 13 also moved from the containment area around that tank to the containment areas around Tanks 12 and 30, although the mechanism for this movement of oil is unclear. Also on February 10, 2010, it was discovered that Tank 15, which was being used to contain spilled oil from Tank 13, was also leaking into its containment area. Figure 2 shows the extent of the crude oil spill at the Site.

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Immediately after the release, Superior initiated oil recovery and clean-up activities at the tank farm and Duck Pond. Oil was recovered using drum skimmers, vacuum skimmers, rope mops, and "super suckers". A system of vacuum trucks, pumps, "frac" tanks, push boats and marine storage was used move and contain the oil. At the Duck Pond, 1,100 linear feet of hard boom was initially deployed to contain the oil, and an additional 500 linear feet of boom was later deployed. The Duck Pond cleanup was completed on February 19, 2010, with 2,200 bbls of crude oil recovered.

Since the initial response, Superior has continued to recover oil and remove contaminated soil, water and debris. Superior has taken precautions to minimize the further spread of crude oil contamination within the immediate area of the release. Superior has used water under high pressure to move the oil and "wash" the tank farm soil where crude was released. This water is being reused, and some water remains in the tank farm containment areas.

As of the date of this plan, all of the recoverable crude oil and almost all of the associated liquids have been recovered from the tank farm. The soil investigation described in Section 2 of this work plan will be conducted once all water used during the cleanup have been removed from the tank farm area. Although much of the area will be visually "clean", the resulting soil surface within the area of investigation will likely still exhibit signs of contamination, such as oil-saturated or oil-stained soil (e.g., in hard to reach locations under pipelines or other structures) and oil-stained vegetation. These features will be considered during the selection of soil sampling locations, as described in Section 2.2, Task 2.

# 1.3 Project Responsibilities

Responsibilities of key project individuals in the implementation of this Site Investigation Work Plan are as follows:

- PBW Project Manager Matt Wickham, (361) 553-6442: responsible for overall project quality related to the collection and reporting of investigation data.
- PBW Field Supervisor John Brayton, (512-695-8609): responsible for activities related to the field investigation.
- Analytical Manager Ed Fry, ALS Laboratory Group, (281) 530-5656: responsible for all analytical activities. He will work closely with the PBW Project Manager regarding analytical QA/QC requirements.

## 2.0 SAMPLING AND ANALYSIS PLAN

#### 2.1 Work Plan Rationale

The primary investigative objective at the Superior site is to evaluate the impacts to site soil from the crude oil spill relative to the applicable regulatory criteria. Specifically, the investigation will:

- Confirm the success (or not) of surface remediation, i.e., show that oily material at the surface has been removed;
- 2) Characterize the vertical extent of any penetration of oil that may have occurred; and
- Characterize the concentrations of TPH and BTEX remaining in soil beneath areas where free oil and oily materials have been removed.

The investigation will be conducted on all parts of the property impacted by the release of crude oil from Tank 13 and Tank 15, and on parts of the property impacted by releases from underground piping that allowed the oil to spread from the containment areas of Tank 13 and Tank 15, excluding the Duck Pond. No investigation will be conducted in the Duck Pond since all crude oil was recovered from the Duck Pond area.

#### 2.2 Scope of Work

A detailed scope of work is provided in Tasks 1 through 5 below.

## Task 1 - Finalize Work Plan and Prepare for Field Activities

Task 1 will include the following activities:

- Prepare Site-Specific Health and Safety Plan (HASP).
- · Procure sampling and other field equipment (GPS, etc.).
- Coordinate with analytical laboratories.
- Coordinate with agency personnel. The Railroad Commission of Texas (RRC) district office in Corpus Christi will be notified at least three days prior to any sampling event related to the investigation described in this plan.

# Task 2 - Soil Sampling

Soil samples will be collected at the general locations shown on Figure 3. In general, eight soil samples will be collected from each tank containment area where crude was released. At the containment area for Tank 16, crude oil did not impact the entire tank containment area and only two samples will be collected at this area. In addition to the tank containment areas, six soil samples will be collected from the drainage ditches south of the tank farm.

Soil sample locations will be finalized in the field based on conditions at the time of sampling. Samples will be collected using the following guidelines:

- Soil sample locations will be chosen to best represent the conditions at the site at the time of the investigation. Since most of the surface soil area will be "clean" (i.e., not visually-impacted), most of the samples will be collected from these areas at the general locations shown on Figure 3. If visually-impacted soil is still present at areas of the site, a subset of samples will be collected from these areas.
- Vegetation that is visually impacted by crude oil will not be sampled. Rather, this material
  will be identified as needing to be removed or remediated.
- One sample will be collected from a depth of 0-6 inches at each location.
- Additional, deeper samples may be collected at some locations based upon field conditions, such as the presence of visually-contaminated soil at the base of the initial 0-6-inch sample.
- Deeper samples may be collected in intervals less than 6 inches, based on field conditions.
   For example, if the material from 6-9 inches is not visually contaminated (and/or does not have an odor), a sample may be collected from 6-9 inches (i.e., a 3-inch sample interval).

All samples will be analyzed for:

- · Total petroleum hydrocarbons (TPH) by method TX1005;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA method 8021B.

The soil sample with the highest TPH concentration by TX1005 will be analyzed for TPH using method TX1006.



In addition to the soil samples, field duplicate samples will be collected at the rate of one duplicate per 20 samples collected (and at least one per day of sampling). The duplicate samples will be "blind", i.e., they will be given a unique sample ID and included with the original samples. One equipment blank sample will also be collected. The equipment blank will be collected by capturing distilled water poured over the decontaminated or disposable sampling equipment.

Samples will be collected using a disposable, plastic hand trowel or stainless-steel soil core sampler fitted with plastic liners. At all locations, a probing tool will be used before sampling to identify the potential presence of underground piping.

Samples will be composited in a stainless steel, decontaminated mixing bowl (or other decontaminated or disposable container such as a plastic Ziploc bag) and the appropriate amount placed in the sample containers provided by the laboratories.

The field geologist or engineer will note the lithology (i.e., approximate percentages of sand, silt and/or clay) and other characteristics (e.g., presence of free oil (NAPL), staining, color, odor, etc.) of each sample on a field log.

All samples will be packaged and delivered to the laboratory in a way to best preserve the integrity of the samples. Samples will be immediately placed in ice chests containing sufficient ice to keep the samples below 4 degrees Celsius. Glass sample containers will be wrapped in protective packaging, as necessary, to prevent breakage. The ice chests will be sealed with tape for shipment to the laboratory via overnight courier or hand delivered by sampling personnel. A chain-of-custody form will be completed and placed in each ice chest with the samples. The chain-of-custody will note the sample identification, date and time of sample collection, sample preservation, sample container volume and type (plastic, glass, etc.) the number of containers and the laboratory analysis to be performed. Table 1 shows the container type, size, number required, and holding times for each type of analysis.

All sample locations will be surveyed in the field using a differential global positioning satellite (GPS) instrument (Trimble® GeoXT).

Investigation-derived wastes (primarily expected to be used personal protective equipment) will be placed in drums or roll-off boxes and characterized as appropriate for subsequent disposal.

# Task 3 - Perform Risk-Based Screening

ALS Laboratory Group will provide a report with the analytical results from the analysis of the soil samples. A quality control report will be issued with the final analytical results. The quality control report will include the analytical method, detection limit, laboratory flags, dilution factor, date analyzed, and results of all QC analyses, including laboratory blank, control, duplicate, matrix spike, and matrix spike duplicate samples. The laboratory will provide a description of any limitations on the use of the data.

The soil analytical results will be tabulated and screened against applicable risk-based regulatory criteria for TPH and BTEX.

# Task 4 - Underground Piping Investigation

Due to the potential presence of residual crude oil in the underground piping at the site, and the potential interconnection of the piping between containment areas, an investigation of the piping will be conducted.

First, all underground piping in the area of the crude spill will be located, to the extent practicable. Some of this work has already been completed, for instance between Tank 13 and Tank 11. Superior identified 12-inch underground piping that connects Tank 13 with Tank 11, and consequently with Tanks 10, 26 and 27, which are all within the Tank 11 containment. Upon examination, Superior found that a valve in the piping was open approximately 3", allowing crude oil to move from the containment area of Tank 13 to the containment area of Tank 11 and elsewhere. The piping between Tank 15 and the ditch has already been located and removed.

Next, the piping will be tested by pumping fresh water through the piping to flush any residual crude oil and determine interconnections between containment areas. For instance, Superior plans to pump fresh water from the valve at Tank 11 to displace any remaining crude and determine where the pipe is open within Tank 13. Superior also plans to uncover the piping between Tank 27 and the Duck Pond, which will also be flushed and sealed.

# Task 5 - Prepare Report and Remediation Plan

Following review of the site data and comparison of the data to regulatory criteria, PBW will prepare a report that will also include a proposed remediation plan. At a minimum, the report will include the

# following:

- · Sample location map (with stock aerial photograph as a base map);
- Tabulated and graphical presentation of investigation data including spatial distribution of hydrocarbons detected in soil at the Site;
- Data table comparing soil concentrations to applicable regulatory criteria;
- · Summary of field investigation methods;
- Photographs;
- Identification of the nature and extent of soil requiring remediation relative to applicable
  regulatory criteria, and a preliminary evaluation of remediation alternatives to achieve closure
  under the Operator Cleanup Program (OCP) of the Railroad Commission of Texas (RRC).

Table 1
Sampling and Analytical Requirements

PARAMETER	METHOD	CONTAINER			PRESERVATION	HOLDING TIME
PARAMETER		SIZE	NUMBER	TYPE	FRESERVATION	HOLDING TIME
TPH	TX 1005	4 oz.	1	Clear glass	4° C	14 days
ТРН	TX 1006	4 oz.	1	Clear glass	4° C	14 days
BTEX	EPA 8021	4 oz.	1	Clear glass	4° C	14 days

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08G CR 148 / BISHOP RD. 10 11 13 26 DUCK POND 12 15 30 SUPERIOR CRUDE GATHERING, INC. **EXPLANATION** Figure 2 EXTENT OF CRUDE OIL RELEASE Extent of Oil Release (Land) Extent of Oil Release (Duck Pond) REVISIONS PROJECT: 3190 BY: ZGK DATE: APRIL, 2010 CHECKED: MKW Approx. Scale in Feet PASTOR, BEHLING & WHEELER, LLC Source of photo: Google Maps accessed 3-16-10. Imagery date: Dec. 31, 2008. CONSULTING ENGINEERS AND SCIENTISTS

